



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0472; Directorate Identifier 2013-SW-040-AD;**

**Amendment 39-18018; AD 2014-23-02]**

**RIN 2120-AA64**

**Airworthiness Directives; Agusta S.p.A. Helicopters (Type Certificate Currently Held by AgustaWestland S.p.A.) (Agusta)**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Agusta Model A109E, A109K2, A119, and AW119 MKII helicopters. This AD requires repetitively performing a magnetic particle inspection of the Gleason crown for a crack. This AD was prompted by a report of a crack that was found on a Gleason crown, which if not detected, could cause damage to or loss of the main rotor drive and subsequent loss of control of the helicopter.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact AgustaWestland, Product Support Engineering, Via del Gregge, 100, 21015 Lonate Pozzolo (VA) Italy, ATTN: Maurizio D'Angelo; telephone 39- 0331-664757; fax 39-0331-664680; or at <http://www.agustawestland.com/technical-bullettins>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Aviation Safety Agency (EASA) AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [rao.edupuganti@faa.gov](mailto:rao.edupuganti@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

On July 16, 2014, at 79 FR 41462, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by adding an

AD that would apply to Agusta Model A109E, A109K2, A119, and AW119 MKII helicopters with a main transmission, part number (P/N) 109-0400-03-103, 109-0400-05-103, and 109-0400-03-109, with a Gleason crown, P/N 109-0403-07-103, installed. The NPRM proposed to require, for main transmissions with 2,400 or more hours time-in-service (TIS), performing repetitive magnetic particle inspections of the Gleason crown for a crack. If there is a crack, the NPRM proposed replacing the Gleason crown assembly before further flight. The NPRM also proposed to prohibit installing a Gleason crown, P/N 109-0403-07-103, or a Gleason crown assembly, P/N 109-0401-27-101 or P/N 109-0401-27-109, on any helicopter. The proposed requirements were intended to detect a crack, which could cause damage to or loss of the main rotor drive and subsequent loss of control of the helicopter.

The NPRM was prompted by AD No. 2013-0118, dated June 3, 2013, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Agusta Model A109K2, A109E, A119, and AW119MKII helicopters. EASA advises that during an overhaul of an A119 main transmission, P/N 109-0400-05-103, a crack on the Gleason crown, P/N 109-0403-07-103, was found. EASA further states that the crack originated from the bottom of one of the 40 threaded holes in the Gleason crown, and that this part-numbered Gleason crown is also installed on Model A109 helicopters. EASA states that this condition, if not corrected, could cause damage to or loss of the main rotor drive and loss of control of the helicopter. To correct this unsafe condition, EASA AD No. 2013-0118 requires repetitive magnetic particle inspections of the Gleason crown and, if there is a crack, replacing the Gleason crown with a different part-numbered Gleason crown. EASA AD No. 2013-0118 also prohibits

installing a Gleason crown, P/N 109-0403-07-103, or a Gleason crown assembly, P/N 109-0401-27-101 or P/N 109-0401-27-109, on any helicopter, as Gleason crown, P/N 109-0403-07-103, is a component of these assemblies.

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM (79 FR 41462, July 16, 2014).

### **FAA's Determination**

These helicopters have been approved by the aviation authority of Italy and are approved for operation in the United States. Pursuant to our bilateral agreement with Italy, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed, except for minor editorial changes. These changes are consistent with the intent of the proposals in the NPRM (79 FR 41462, July 16, 2014) and will not increase the economic burden on any operator nor increase the scope of the AD.

### **Differences Between this AD and the EASA AD**

This AD requires compliance within 200 hours TIS for main transmissions with 2,400 or more hours. The EASA AD requires different compliance times, depending on the number of flight hours the transmission has accumulated.

## **Related Service Information**

We reviewed Agusta Bollettino Tecnico (BT) No. 109EP-128 for Model A109E helicopters, Agusta BT No. 109K-57 for Model A109K2 helicopters, and Agusta BT No. 119-058 for Model A119 and AW119MKII helicopters, each Revision A and dated May 28, 2013. Each BT describes procedures for performing a magnetic particle inspection on the Gleason crown, P/N 109-0403-07-103, for a crack. If there is a crack, each BT specifies replacing the Gleason crown assembly with a Gleason crown assembly, P/N 109-0401-27-107.

We also reviewed Agusta BT No. 109EP-126 for Model A109E helicopters, Agusta BT No. 109K-56 for Model A109K2 helicopters, and Agusta BT No. 119-053 for Model A119 and AW119MKII helicopters, each dated December 20, 2012. These BTs contain procedures for upgrading the transmission system by replacing the Gleason crown assembly with a Gleason crown assembly, P/N 109-0401-27-107.

## **Costs of Compliance**

We estimate that this AD affects 218 helicopters of U.S. registry. We estimate the following costs to comply with this AD. At an average labor rate of \$85 per hour, magnetic particle inspecting the Gleason crown requires about 24 work-hours, for an estimated cost per helicopter of \$2,040, and a total cost of \$444,720 for the U.S. fleet, per inspection cycle.

If required, replacing the Gleason crown assembly requires about 24 work-hours, and required parts will cost \$29,000, for a cost per helicopter of \$31,040.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not

control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2014-23-02 Agusta S.p.A Helicopters (Type Certificate Currently Held By AgustaWestland S.p.A.) (Agusta):** Amendment 39-18018; Docket No. FAA-2014-0472; Directorate Identifier 2013-SW-040-AD.

#### **(a) Applicability**

This AD applies to Agusta Model A109E, A109K2, A119, and AW119 MKII helicopters with a main transmission, part number (P/N) 109-0400-03-103, 109-0400-05-

103, or 109-0400-03-109, with a Gleason crown, P/N 109-0403-07-103, installed, certificated in any category.

**(b) Unsafe Condition**

This AD defines the unsafe condition as a crack in a Gleason crown. This condition could cause damage to or loss of the main rotor drive and subsequent loss of control of the helicopter.

**(c) Effective Date**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

(1) For main transmissions with 2,400 or more hours time-in-service (TIS), within 200 hours TIS and thereafter at intervals not exceeding 1,600 hours TIS, magnetic particle inspect the Gleason crown, P/N 109-0403-07-103, for a crack by following the procedures in:

(i) Annex 1 of Agusta Bollettino Tecnico (BT) No. 109EP-128, Revision A, dated May 28, 2013, for Model A109E helicopters;

(ii) Annex 1 of Agusta BT No. 109K-57, Revision A, dated May 28, 2013, for Model A109K2 helicopters; or

(iii) Annex 1 of Agusta BT No. 119-058, Revision A, dated May 28, 2013, for Model A119 and AW119MKII helicopters.

(2) If there is a crack, before further flight, replace the Gleason crown assembly with a Gleason Crown assembly, P/N 109-0401-27-107. Replacing the Gleason crown assembly with P/N 109-0401-27-107 is terminating action for the inspection requirements of this AD.

(3) After the effective date of this AD, do not install a Gleason crown, P/N 109-0403-07-103, or a Gleason crown assembly, P/N 109-0401-27-101 or P/N 109-0401-27-109, on any helicopter.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [rao.edupuganti@faa.gov](mailto:rao.edupuganti@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2013-0118, dated June 3, 2013. You may view the EASA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2014-0472.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 6320: Main Rotor Gearbox.

**(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) AgustaWestland Bollettino Tecnico No. 109EP-128, Revision A, dated May 28, 2013.

(ii) AgustaWestland Bollettino Tecnico No. 109K-57, Revision A, dated May 28, 2013.

(iii) AgustaWestland Bollettino Tecnico No. 119-058, Revision A, dated May 28, 2013.

(3) For AgustaWestland service information identified in this AD, contact AgustaWestland, Product Support Engineering, Via del Gregge, 100, 21015 Lonate Pozzolo (VA) Italy, ATTN: Maurizio D'Angelo; telephone 39- 0331-664757; fax 39-0331-664680; or at <http://www.agustawestland.com/technical-bullettins>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on October 30, 2014.

Lance T. Gant,

Acting Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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11/20/2014]